

Maryland Transit Administration Pension Plan

GASB Statement Nos. 67 and 68 Accounting and Financial
Reporting for Pensions
June 30, 2021





October 8, 2021

Ms. Laurie Brown
Deputy CFO
Maryland Transit Administration
6 St. Paul Street, 8th Floor
Baltimore, Maryland 21202

Dear Ms. Brown:

This report provides information on behalf of the Maryland Transit Administration (MTA) Pension Plan that is intended to comply with Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 for the Maryland Transit Administration Pension Plan. These calculations have been made on a basis that is consistent with our understanding of these Statements.

GASB Statement No. 67 is the accounting standard that applies to the stand-alone financial reports issued by retirement systems. GASB Statement No. 68 establishes accounting and financial reporting for state and local government employers who provide their employees (including former employees) pension benefits through a trust.

The calculation of the liability associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statement Nos. 67 and 68. The calculation of the plan's liability for this report is not applicable for funding purposes of the plan.

A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the MTA only in its entirety and only with the permission of the MTA and the Board. GRS is not responsible for unauthorized use of this report.

The Net Pension Liability is not an appropriate measure for measuring the sufficiency of plan assets to cover the estimated cost of settling the employer's benefit obligation, nor is it an appropriate measure for assessing the need for or amount of future employer contributions.

This report is based upon information, provided to us by the MTA, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited. We are not responsible for the accuracy or completeness of the information provided by the MTA.

This report complements the actuarial valuation report that was provided to the Maryland Transit Administration Pension Plan and should be considered in conjunction with that report. Please see the actuarial valuation report as of July 1, 2021 for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

The actuarial assumptions in this report are the same as those used in the July 1, 2021 actuarial valuation with the following exceptions:

- The actuarial cost method is the Entry-age Normal Cost method, as required by GASB;
- Projected benefits for purposes of calculating the Single Discount Rate (SDR) and resulting liabilities in this report included an assumed Cost-of-Living Adjustment (COLA) of 2.00%;
- In accordance with the most recent economic assumptions adopted by the Maryland State Retirement and Pension System, the expected rate of return on plan investments is 6.80% and the wage inflation assumption is 2.75%.

The actuarial assumptions used to value the liabilities are the same as those used for the June 30, 2020 GASB 68 report with the following changes:

- The expected rate of return on plan investments decreased from 7.40% to 6.80%;
- The wage inflation assumption decreased from 3.10% to 2.75%;
- The assumed COLA decreased from 2.10% to 2.00%;
- The SDR decreased from 4.05% to 3.26%.

Actuarial assumptions were last reviewed in connection with a study conducted by the prior actuary of 2014-2018 experience in the Experience Study report dated August 16, 2019, which includes the rationale for the assumptions.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

To the best of our knowledge, the information contained within this report is accurate and fairly represents the actuarial position of the Maryland Transit Administration Pension Plan. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.



Ms. Laurie Brown

October 8, 2021

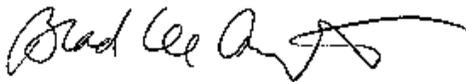
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This information is intended to assist in preparation of the financial statements of the Maryland Transit Administration Pension Plan. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

The signing actuaries are independent of the plan sponsor.

Brad Lee Armstrong and Kevin T. Noelke, Derek Henning and Jamal Adora are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Brad Lee Armstrong, ASA, EA, FCA, MAAA



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Auditor's Note – This information is intended to assist in preparation of the financial statements of the Maryland Transit Administration. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.



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SECTION A



EXECUTIVE SUMMARY

Executive Summary

Actuarial Valuation Date	July 1, 2021
Measurement Date of the Net Pension Liability	June 30, 2021
Employer's Fiscal Year Ending Date (Reporting Date)	June 30, 2021

Membership

Number of	
- Retirees and Beneficiaries	2,033
- Inactive, Nonretired Members	525
- Active Members	2,532
- Total	5,090
Covered Payroll #	\$ 164,552,701

Net Pension Liability

Total Pension Liability	\$ 1,577,612,983
Plan Fiduciary Net Position	447,377,971
Net Pension Liability	\$ 1,130,235,012
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	28.36%
Net Pension Liability as a Percentage of Covered Payroll	686.85%

Development of the Single Discount Rate

Single Discount Rate, End of Year	3.26%
Single Discount Rate, Beginning of Year	4.05%
Long-Term Expected Rate of Investment Return, End of Year	6.80%
Long-Term Expected Rate of Investment Return, Beginning of Year	7.40%
Long-Term Municipal Bond Rate, End of Year *	1.92%
Long-Term Municipal Bond Rate, Beginning of Year *	2.45%
Last year ending June 30 in the 2022 to 2121 projection period for which projected benefit payments are fully funded	2047

Total Pension Expense	\$ 103,728,142
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Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 5,794,956	\$ 33,603,441
Changes in assumptions	233,511,177	87,847,484
Net difference between projected and actual earnings on pension plan investments	8,391,063	56,940,777
Total	\$ 247,697,196	\$ 178,391,702

*Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2020 and June 30, 2021. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities.

Valuation payroll as of June 30, 2021.



Discussion

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the Net Pension Liability, Pension Expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information is not included in this report if it is not actuarial in nature, such as the notes to the financial statements regarding accounting policies and investments. As a result, the retirement system and/or plan sponsor is responsible for preparing and disclosing the non-actuarial information needed to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state and local government employers that contribute to DB pension plans to recognize the Net Pension Liability and the pension expense on their financial statements, along with the related deferred outflows of resources and deferred inflows of resources. The Net Pension Liability is the difference between the Total Pension Liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the Market Value of Assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Paragraph 57 of GASB Statement No. 68 states, "Contributions to the pension plan from the employer subsequent to the measurement date of the collective Net Pension Liability and before the end of the employer's reporting period should be reported as a deferred outflow of resources related to pensions." The information contained in this report does not incorporate any contributions made to the Maryland Transit Administration Pension Plan subsequent to the measurement date of June 30, 2021.

The Pension Expense recognized each fiscal year is equal to the change in the Net Pension Liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the certain changes in the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a statement of Fiduciary Net Position and a statement of changes in Fiduciary Net Position in accordance with GASB Statement No. 67. The statement of Fiduciary Net Position presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The statement of changes in Fiduciary Net Position presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the Fiduciary Net Position.

Discussion

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans, to include certain additional information. The list of disclosure items should include:

- A description of benefits provided by the plan;
- The type of employees and number of members covered by the pension plan;
- A description of the plan's funding policy, which includes member and employer contribution requirements;
- The pension plan's investment policies;
- The pension plan's Fiduciary Net Position, Net Pension Liability, and the pension plan's Fiduciary Net Position as a percentage of the Total Pension Liability;
- The Net Pension Liability using a discount rate that is 1% higher and 1% lower than used to calculate the Total Pension Liability and Net Pension Liability for financial reporting purposes;
- Significant assumptions and methods used to calculate the Total Pension Liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- The composition of the pension plan's Board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;
- Information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.

Required Supplementary Information

The financial statements of employers also include required supplementary information showing the 10-year fiscal history of:

- Sources of changes in the Net Pension Liability;
- Information about the components of the Net Pension Liability and related ratios, including the pension plan's fiduciary net position as a percentage of the Total Pension Liability, and the Net Pension Liability as a percent of covered-employee payroll; and
- A comparison of actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

Discussion

While the first two tables may be built prospectively as the information becomes available, sufficient information is currently available for the third table.

Frequency and Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. For employer reporting, the net pension liability and pension expense should be measured as of a date (measurement date) no earlier than the end of the employer's prior fiscal year, consistently applied from period to period. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The Total Pension Liability shown in this report is based on an actuarial valuation performed as of July 1, 2021 and a measurement date of June 30, 2021.

Benefits Valued

The benefit provisions that were valued in this report are the same as those stated in the July 1, 2021 actuarial valuation. They are required to be performed on the current benefit terms and existing legal agreements. Consideration is to be given to the written plan document as well as other communications between the employer and plan members and an established pattern of practice for cost sharing. The summary of major plan provisions is designed to outline principal plan benefits. If the plan summary is not in accordance with the actual provisions, please alert the actuary IMMEDIATELY so they can both be sure the proper provisions are valued.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits); and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the plan's projected fiduciary net position is not sufficient to pay benefits).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.80%; the municipal bond rate is 1.92%; and the resulting Single Discount Rate is 3.26%.

Discussion

Actuarial Assumptions

The actuarial assumptions in this report are the same as those used in the July 1, 2021 actuarial valuation with the following exceptions:

- The actuarial cost method is the Entry-age Normal Cost method, as required by GASB;
- Projected benefits for purposes of calculating the Single Discount Rate (SDR) and resulting liabilities in this report included an assumed Cost-of-Living Adjustment (COLA) of 2.00%; and
- In accordance with the most recent economic assumptions adopted by the Maryland State Retirement and Pension System, the expected rate of return on plan investments is 6.80% and the wage inflation assumption is 2.75%.

The actuarial assumptions used to value the liabilities are the same as those used for the June 30, 2020 GASB 68 report with the following changes:

- The expected rate of return on plan investments decreased from 7.40% to 6.80%;
- The wage inflation assumption decreased from 3.10% to 2.75%;
- The assumed COLA decreased from 2.10% to 2.00%; and
- The SDR decreased from 4.05% to 3.26%.

Actuarial assumptions were last reviewed in connection with a study conducted by the prior actuary of 2014-2018 experience in the Experience Study report dated August 16, 2019, which includes the rationale for the assumptions.

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 6.80% on the actuarial value of assets), then the following outcomes are expected:

1. The employer normal cost as a percentage of pay is expected to remain level as a percentage of payroll.
2. The unfunded liability is not expected to be fully amortized during the lifetimes of current members.
3. The funded status of the plan is expected to increase gradually towards a 100% funded ratio.

This funding policy results in an expected crossover date in 2047 and a GASB single discount rate of 3.26%. The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

SECTION B

FINANCIAL STATEMENTS

Statement of Pension Expense Under GASB Statement No. 68

Fiscal Year Ended June 30, 2021

A. Expense

1. Service Cost	\$	43,826,625
2. Interest on the Total Pension Liability		56,405,792
3. Current-Period Benefit Changes		-
4. Employee Contributions (made negative for addition here)		(7,311,254)
5. Projected Earnings on Plan Investments (made negative for addition here)		(25,532,868)
6. Pension Plan Administrative Expense		3,602,429
7. Other Changes in Plan Fiduciary Net Position		-
8. Recognition of Outflow (Inflow) of Resources due to Liabilities		46,133,185
9. Recognition of Outflow (Inflow) of Resources due to Assets		(13,395,767)
10. Total Pension Expense	\$	103,728,142

Statement of Outflows and Inflows Arising from Current Reporting Period Fiscal Year Ended June 30, 2021

A. Outflows (Inflows) of Resources Due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ (11,808,688)
2. Assumption Changes (gains) or losses	\$ 140,734,720
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	6.0000
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	\$ (1,968,115)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ 23,455,787
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$ 21,487,672
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the difference between expected and actual experience of the Total Pension Liability	\$ (9,840,573)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ 117,278,933
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$ 107,438,360

B. Outflows (Inflows) of Resources Due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ (67,679,856)
2. Recognition period for Assets {in years}	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$ (13,535,971)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ (54,143,885)

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30, 2021

A. Outflows and Inflows of Resources Due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ 99,367,367	\$ 53,234,182	\$ 46,133,185
2. Due to Assets	3,068,551	16,464,318	(13,395,767)
3. Total	\$ 102,435,918	\$ 69,698,500	\$ 32,737,418

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ 2,897,477	\$ 14,158,406	\$ (11,260,929)
2. Assumption Changes	96,469,890	39,075,776	57,394,114
3. Net Difference between projected and actual earnings on pension plan investments	3,068,551	16,464,318	(13,395,767)
4. Total	\$ 102,435,918	\$ 69,698,500	\$ 32,737,418

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ 5,794,956	\$ 33,603,441	\$ (27,808,485)
2. Assumption Changes	233,511,177	87,847,484	145,663,693
3. Net Difference between projected and actual earnings on pension plan investments	8,391,063	56,940,777	(48,549,714)
4. Total	\$ 247,697,196	\$ 178,391,702	\$ 69,305,494

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2022	\$ 29,430,340
2023	(17,252,030)
2024	13,591,786
2025	22,047,726
2026	21,487,672
Thereafter	-
Total	\$ 69,305,494

Recognition of Deferred Outflows and Inflows of Resources

Fiscal Year Ended June 30, 2021

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) Due to Differences Between Expected and Actual Experience on Liabilities					
2015	\$ (19,621,279)	7.0000	\$ (2,803,039)	\$ -	0.0000
2016	(15,023,996)	7.0000	(2,146,285)	(2,146,286)	1.0000
2017	(20,741,099)	7.0000	(2,963,014)	(5,926,029)	2.0000
2018	17,384,864	6.0000	2,897,477	5,794,956	2.0000
2019	(8,527,580)	6.0000	(1,421,263)	(4,263,791)	3.0000
2020	(17,140,142)	6.0000	(2,856,690)	(11,426,762)	4.0000
2021	(11,808,688)	6.0000	(1,968,115)	(9,840,573)	5.0000
Total			\$ (11,260,929)	\$ (27,808,485)	
Deferred Outflow (Inflow) Due to Assumption Changes					
2015	\$ 53,480,106	7.0000	\$ 7,640,016	\$ -	0.0000
2016	338,949,559	7.0000	48,421,366	48,421,363	1.0000
2017	(162,605,699)	7.0000	(23,229,386)	(46,458,769)	2.0000
2018	(36,902,711)	6.0000	(6,150,452)	(12,300,903)	2.0000
2019	(58,175,626)	6.0000	(9,695,938)	(29,087,812)	3.0000
2020	101,716,323	6.0000	16,952,721	67,810,881	4.0000
2021	140,734,720	6.0000	23,455,787	117,278,933	5.0000
Total			\$ 57,394,114	\$ 145,663,693	
Deferred Outflow (Inflow) Due to Differences Between Projected and Actual Earnings on Plan Investments					
2017	\$ (7,649,509)	5.0000	\$ (1,529,901)	\$ -	0.0000
2018	2,036,482	5.0000	407,296	407,298	1.0000
2019	(6,992,230)	5.0000	(1,398,446)	(2,796,892)	2.0000
2020	13,306,275	5.0000	2,661,255	7,983,765	3.0000
2021	(67,679,856)	5.0000	(13,535,971)	(54,143,885)	4.0000
Total			\$ (13,395,767)	\$ (48,549,714)	

According to paragraph 33 of GASB No. 68, differences between expected and actual experience and changes in assumptions are recognized in pension expense using a systematic and rational method over a closed period equal to the average of the expected remaining service lives of all employees that are provided with pensions through the pension plan (active employees and inactive employees) determined as of the beginning of the measurement period.

At the beginning of the current measurement period, the expected remaining service lives of all active employees in the plan was approximately 30,726 years. Additionally, the total plan membership (active DB employees and inactive employees) was 5,121. As a result, the average of the expected remaining service lives for purposes of recognizing the applicable deferred outflows and inflows of resources established in the current measurement period is 6.0000 years.

Additionally, differences between projected and actual earnings on pension plan investments should be recognized in pension expense using a systematic and rational method over a closed five-year period. For this purpose, the deferred outflows and inflows of resources are recognized in the pension expense as a level dollar amount over the closed period identified above.

Statement of Fiduciary Net Position as of June 30, 2021

Assets

Cash and Cash Equivalents	\$	9,384,439
Receivables	\$	-
Investments		
U.S. Government Obligations	\$	47,557,179
Domestic Corporate Obligations		29,963,899
International Obligations		17,140,513
Domestic Stocks		70,948,627
International Stocks		89,586,592
Mortgage and Mortgage Related		8,216,959
Alternative Investments		174,579,763
Total Investments	\$	<u>437,993,532</u>
Total Assets	\$	<u>447,377,971</u>

Liabilities

Payables		
Accounts Payable - Purchase of Investments	\$	-
Accrued Expenses		-
Accounts Payable - Other		-
Total Liabilities	\$	<u>-</u>
Net Position Restricted for Pensions	\$	<u>447,377,971</u>

Statement of Changes in Fiduciary Net Position for Year Ended June 30, 2021

Additions

Contributions	
Employer	\$ 59,279,675
Employee	7,311,254
Other	-
Total Contributions	\$ 66,590,929
Investment Income	
Net Appreciation in Fair Value of Investments	\$ 48,772,832
Interest, Dividends and Other Income	44,439,892
Less Investment Expense	-
Net Investment Income	\$ 93,212,724
Total Additions	\$ 159,803,653

Deductions

Benefit Payments, Including Refunds of Employee Contributions	\$ 44,735,513
Administrative Expense	3,602,429
Total Deductions	\$ 48,337,942
Net Increase in Net Position	\$ 111,465,711

Net Position Restricted for Pensions

Beginning of Year	\$ 335,912,260
End of Year	\$ 447,377,971

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Net Pension Liability and Related Ratios

Current Period

Fiscal Year Ended June 30, 2021

A. Total Pension Liability	
1. Service Cost	\$ 43,826,625
2. Interest on the Total Pension Liability	56,405,792
3. Changes of benefit terms	-
4. Difference between expected and actual experience of the Total Pension Liability	(11,808,688)
5. Changes of assumptions	140,734,720
6. Benefit payments, including refunds of employee contributions	(44,735,513)
7. Net change in Total Pension Liability	\$ 184,422,936
8. Total Pension Liability – Beginning	1,393,190,047
9. Total Pension Liability – Ending	<u><u>\$ 1,577,612,983</u></u>
B. Plan Fiduciary Net Position	
1. Contributions – employer	\$ 59,279,675
2. Contributions – employee	7,311,254
3. Net investment income	93,212,724
4. Benefit payments, including refunds of employee contributions	(44,735,513)
5. Pension Plan Administrative Expense	(3,602,429)
6. Other	-
7. Net change in Plan Fiduciary Net Position	\$ 111,465,711
8. Plan Fiduciary Net Position – Beginning	335,912,260
9. Plan Fiduciary Net Position – Ending	<u><u>\$ 447,377,971</u></u>
C. Net Pension Liability	<u><u>\$ 1,130,235,012</u></u>
D. Plan Fiduciary Net Position as a percentage of the Total Pension Liability	28.36%
E. Covered-employee payroll *	\$ 164,552,701
F. Net Pension Liability as a percentage of covered-employee payroll *	686.85%

* Covered payroll shown is the valuation payroll.

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios Multiyear

Ultimately 10 Fiscal Years will be Displayed

Fiscal year ending June 30,	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability								
Service Cost	\$ 43,826,625	\$ 42,307,645	\$ 36,026,872	\$ 37,194,586	\$ 36,333,940	\$ 48,498,923	\$ 24,718,074	\$ 19,438,000
Interest on the Total Pension Liability	56,405,792	55,831,451	56,518,997	54,904,314	57,880,638	31,181,033	39,236,563	43,472,000
Benefit Changes	-	208,455	(202,648)	3,105,575	2,132,647	82,510,189	-	-
Difference between Expected and Actual Experience Assumption Changes	(11,808,688)	(17,140,142)	(8,527,580)	17,384,864	(20,741,099)	(15,023,996)	(19,621,279)	4,025,000
Benefit Payments, including refunds of contributions	(44,735,513)	(44,432,068)	(42,723,850)	(37,203,253)	(39,062,347)	(35,283,202)	(30,636,207)	(32,598,000)
Net Change in Total Pension Liability	184,422,936	138,491,664	(17,083,835)	38,483,375	(126,061,920)	450,832,506	67,177,257	72,980,000
Total Pension Liability - Beginning	1,393,190,047	1,254,698,383	1,271,782,218	1,233,298,843	1,359,360,763	908,528,257	841,351,000	768,371,000
Total Pension Liability - Ending (a)	\$ 1,577,612,983	\$ 1,393,190,047	\$ 1,254,698,383	\$ 1,271,782,218	\$ 1,233,298,843	\$ 1,359,360,763	\$ 908,528,257	\$ 841,351,000
Plan Fiduciary Net Position								
Employer Contributions	\$ 59,279,675	\$ 43,249,926	\$ 41,597,059	\$ 40,997,059	\$ 40,997,059	\$ 40,997,059	\$ 35,400,000	\$ 39,749,000
Employee Contributions	7,311,254	4,609,744	3,005,759	3,315,683	3,094,029	-	-	-
Pension Plan Net Investment Income	93,212,724	12,831,812	31,023,630	20,550,290	27,740,945	12,767,932	14,044,525	15,783,000
Benefit Payments, including refunds of contributions	(44,735,513)	(44,432,068)	(42,723,850)	(37,203,253)	(39,062,347)	(35,283,202)	(30,636,207)	(32,598,000)
Pension Plan Administrative Expense	(3,602,429)	(2,651,571)	(2,325,372)	(2,213,277)	(1,914,322)	(1,967,196)	(1,850,637)	(1,587,000)
Other	-	-	(6,719,636)	-	(2,630,692)	-	-	-
Net Change in Plan Fiduciary Net Position	111,465,711	13,607,843	23,857,590	25,446,502	28,224,672	16,514,593	16,957,681	21,347,000
Plan Fiduciary Net Position - Beginning	335,912,260	322,304,417	298,446,827	273,000,325	244,775,653	228,261,060	211,303,379	189,957,000
Plan Fiduciary Net Position - Ending (b)	\$ 447,377,971	\$ 335,912,260	\$ 322,304,417	\$ 298,446,827	\$ 273,000,325	\$ 244,775,653	\$ 228,261,060	\$ 211,303,000
Net Pension Liability - Ending (a) - (b)	1,130,235,012	1,057,277,787	932,393,966	973,335,391	960,298,518	1,114,585,110	680,267,197	630,048,000
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	28.36 %	24.11 %	25.69 %	23.47 %	22.14 %	18.01 %	25.12 %	25.11 %
Covered Employee Payroll *	\$ 164,552,701	\$ 149,767,952	\$ 148,444,632	\$ 145,833,561	\$ 137,153,770	\$ 137,427,168	\$ 135,544,813	\$ 137,596,326
Net Pension Liability as a Percentage of Covered Employee Payroll *	686.85 %	705.94 %	628.11 %	667.43 %	700.16 %	811.04 %	501.88 %	457.90 %

* Covered payroll shown is the valuation payroll.
Results prior to FYE 2021 were not calculated by GRS.



Schedule of Required Supplementary Information Schedule of the Net Pension Liability

Ultimately 10 Fiscal Years will be Displayed

FY Ending June 30,	Total Pension Liability #	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll *	Net Pension Liability as a % of Covered Payroll
2014	\$ 841,351,000	\$ 211,303,379	\$ 630,047,621	25.11%	137,596,326	457.90%
2015	908,528,257	228,261,060	680,267,197	25.12%	135,544,813	501.88%
2016	1,359,360,763	244,775,653	1,114,585,110	18.01%	137,427,168	811.04%
2017	1,233,298,843	273,000,325	960,298,518	22.14%	137,153,770	700.16%
2018	1,271,782,218	298,446,827	973,335,391	23.47%	145,833,561	667.43%
2019	1,254,698,383	322,304,417	932,393,966	25.69%	148,444,632	628.11%
2020	1,393,190,047	335,912,260	1,057,277,787	24.11%	149,767,952	705.94%
2021	1,577,612,983	447,377,971	1,130,235,012	28.36%	164,552,701	686.85%

* Covered payroll shown is the valuation payroll.

Results prior to FYE 2021 were not calculated by GRS.



Schedule of Contributions Multiyear

Ultimately 10 Fiscal Years will be Displayed

FY Ending June 30,	Actuarially Determined Contribution #	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll *	Actual Contribution as a % of Covered Payroll
2012	\$ 32,859,285	\$ 32,859,285	\$ -	\$147,474,199	22.28%
2013	34,582,249	29,518,757	5,063,492	152,276,494	19.38%
2014	39,748,933	39,748,933	-	137,596,326	28.89%
2015	40,807,270	35,400,000	5,407,270	135,544,813	26.12%
2016	44,736,075	40,997,059	3,739,016	137,427,168	29.83%
2017	62,217,185	40,997,059	21,220,126	137,153,770	29.89%
2018	66,495,406	40,997,059	25,498,347	145,833,561	28.11%
2019	64,648,783	41,597,059	23,051,724	148,444,632	28.02%
2020	55,213,341	43,249,926	11,963,415	149,767,952	28.88%
2021	58,841,684	59,279,675	(437,991)	164,552,701	36.02%

* Covered payroll shown is the valuation payroll.

Contribution rates for FYE 2021 and prior were not calculated by GRS.



Notes to Schedule of Contributions

Valuation Date:	July 1, 2020
Notes	Actuarially determined contribution amounts are calculated as of July 1 each year, which is the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates for FY Ending June 30, 2021:

Actuarial Cost Method	Entry-Age - Level Dollar Normal Cost
Amortization Method	Level dollar, closed
Remaining Amortization Periods	2-24 years
Asset Valuation Method	5-Year smoothed market for funding
Wage Inflation	3.10%
Salary Increases	3.10% to 9.10% including inflation
Investment Rate of Return	7.40%
Retirement Age	Age-based table of rates that are specific to the type of eligibility condition.
Mortality	Pre-retirement: RP-2014 Blue Collar Employee mortality table, sex distinct, with generational mortality improvements from 2006 using scale MP-2018. Post-retirement Healthy lives: RP-2014 Blue Collar Healthy Retiree mortality table, sex distinct, with generational mortality improvements from 2006 using scale MP-2018. Post-retirement Disabled lives: RP-2014 Disabled Retiree mortality table, sex distinct, with generational mortality improvements from 2006 using scale MP-2018.

Other Information:	
Notes	N/A

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

Single Discount Rate

The Single Discount Rate used to measure the June 30, 2020 total pension liability was 4.05%. A Single Discount Rate of 3.26% was used to measure the June 30, 2021 total pension liability. This Single Discount Rate was based on a municipal bond rate of 1.92% and an expected rate of return on pension plan investments of 6.80%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the benefit payments through the year 2047.

Regarding the sensitivity of the Net Pension Liability to changes in the Single Discount Rate, the following presents the plan's Net Pension Liability, calculated using a Single Discount Rate of 3.26%, as well as what the plan's Net Pension Liability would be if it were calculated using a Single Discount Rate that is 1-percentage-point lower or 1-percentage-point higher:

	1% Decrease 2.26%	Current Single Discount Rate 3.26%	1% Increase 4.26%
Total Pension Liability	\$ 1,832,911,403	\$ 1,577,612,983	\$ 1,369,822,706
Plan Fiduciary Net Position	447,377,971	447,377,971	447,377,971
Net Pension Liability/(Asset)	\$ 1,385,533,432	\$ 1,130,235,012	\$ 922,444,735

SECTION D

CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate

GASB Statement No. 68 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects 1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits); and 2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.80%; the municipal bond rate is 1.92%; and the resulting Single Discount Rate is 3.26%.

The tables in this section provide background for the development of the Single Discount Rate.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the Single Discount Rate. It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan. Contribution amounts shown are strictly for the purpose of testing for a GASB depletion date and may differ from those determined by a funding valuation.

Single Discount Rate Development

Projection of Contributions Ending June 30, 2071

Year	Payroll for Current Employees	Service Cost Contributions and Contributions from Current Employees	Administrative Expense Contributions	UAL Contributions	Total Contributions
0	\$ 164,552,701				
1	168,127,037	\$ 12,882,674	\$ 3,680,679	\$ 47,373,400	\$ 63,936,753
2	162,477,505	12,076,850	3,556,998	36,899,191	52,533,039
3	157,730,726	11,381,681	3,453,081	36,043,375	50,878,138
4	152,659,497	10,725,678	3,342,060	35,399,911	49,467,648
5	147,560,722	10,114,565	3,230,436	33,881,691	47,226,692
6	142,469,949	9,546,252	3,118,988	33,881,691	46,546,931
7	137,207,449	8,993,858	3,003,780	33,881,691	45,879,329
8	132,088,804	8,463,100	2,891,721	33,881,691	45,236,512
9	126,765,047	7,941,114	2,775,172	33,881,691	44,597,977
10	121,686,023	7,448,758	2,663,981	33,881,691	43,994,430
11	116,592,413	6,976,511	2,552,470	33,849,162	43,378,143
12	111,554,261	6,523,437	2,442,174	33,843,039	42,808,650
13	106,511,527	6,085,597	2,331,777	33,843,039	42,260,413
14	101,586,477	5,669,680	2,223,957	33,843,039	41,736,676
15	96,769,344	5,274,632	2,118,499	33,843,039	41,236,169
16	91,883,663	4,891,720	2,011,540	33,843,039	40,746,299
17	87,011,338	4,523,838	1,904,874	33,843,039	40,271,751
18	82,109,512	4,168,189	1,797,562	33,843,039	39,808,790
19	77,019,680	3,818,447	1,686,134	31,141,454	36,646,035
20	72,035,904	3,488,250	1,577,028	27,475,841	32,541,119
21	66,911,088	3,166,202	1,464,834	30,378,041	35,009,077
22	61,871,660	2,861,549	1,354,510	30,935,889	35,151,948
23	56,892,132	2,571,498	1,245,497	31,535,018	35,352,013
24	51,910,140	2,292,939	1,136,430	(1,518,219)	1,911,150
25	46,911,170	2,024,866	1,026,991	-	3,051,857
26	41,868,504	1,766,597	916,596	-	2,683,193
27	36,901,931	1,521,918	807,866	-	2,329,784
28	32,080,226	1,293,784	702,308	-	1,996,092
29	27,446,865	1,081,789	600,874	-	1,682,663
30	23,256,122	896,406	509,129	-	1,405,535
31	19,450,723	733,074	425,820	-	1,158,894
32	16,100,771	593,567	352,482	-	946,049
33	13,231,146	477,503	289,660	-	767,163
34	10,747,334	379,534	235,283	-	614,817
35	8,659,047	299,390	189,566	-	488,956
36	6,918,481	234,229	151,461	-	385,690
37	5,502,821	182,378	120,469	-	302,847
38	4,350,903	141,255	95,251	-	236,506
39	3,427,394	108,769	75,033	-	183,802
40	2,660,518	82,626	58,245	-	140,871
41	2,011,554	61,174	44,037	-	105,211
42	1,495,799	44,477	32,746	-	77,223
43	1,069,143	31,136	23,406	-	54,542
44	767,379	21,884	16,800	-	38,684
45	532,605	14,900	11,660	-	26,560
46	356,906	9,813	7,813	-	17,626
47	246,293	6,644	5,392	-	12,036
48	168,886	4,446	3,697	-	8,143
49	111,420	2,870	2,439	-	5,309
50	74,582	1,883	1,633	-	3,516



Single Discount Rate Development Projection of Plan Fiduciary Net Position Ending June 30, 2071

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 6.80%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	\$ 447,377,971	\$ 63,936,753	\$ 46,642,988	\$ 3,680,679	\$ 30,876,935	\$ 491,867,992
2	491,867,992	52,533,039	50,765,794	3,556,998	33,387,173	523,465,411
3	523,465,411	50,878,138	54,589,045	3,453,081	35,356,078	551,657,501
4	551,657,501	49,467,648	58,319,824	3,342,060	37,104,924	576,568,190
5	576,568,190	47,226,692	61,933,079	3,230,436	38,606,814	597,238,181
6	597,238,181	46,546,931	65,568,822	3,118,988	39,871,786	614,969,089
7	614,969,089	45,879,329	69,044,069	3,003,780	40,942,800	629,743,370
8	629,743,370	45,236,512	72,486,682	2,891,721	41,814,579	641,416,057
9	641,416,057	44,597,977	75,806,276	2,775,172	42,479,856	649,912,441
10	649,912,441	43,994,430	79,073,738	2,663,981	42,931,878	655,101,030
11	655,101,030	43,378,143	82,177,132	2,552,470	43,164,042	656,913,613
12	656,913,613	42,808,650	85,119,943	2,442,174	43,173,532	655,333,678
13	655,333,678	42,260,413	87,903,538	2,331,777	42,958,368	650,317,145
14	650,317,145	41,736,676	90,496,670	2,223,957	42,516,619	641,849,812
15	641,849,812	41,236,169	92,987,140	2,118,499	41,844,346	629,824,689
16	629,824,689	40,746,299	95,310,927	2,011,540	40,936,123	614,184,644
17	614,184,644	40,271,751	97,463,462	1,904,874	39,788,315	594,876,375
18	594,876,375	39,808,790	99,510,592	1,797,562	38,395,002	571,772,013
19	571,772,013	36,646,035	101,414,753	1,686,134	36,658,190	541,975,351
20	541,975,351	32,541,119	103,186,613	1,577,028	34,439,141	504,191,970
21	504,191,970	35,009,077	104,846,045	1,464,834	31,900,661	464,790,828
22	464,790,828	35,151,948	106,287,282	1,354,510	29,181,654	421,482,638
23	421,482,638	35,352,013	107,545,777	1,245,497	26,204,948	374,248,325
24	374,248,325	1,911,150	108,641,679	1,136,430	21,841,723	288,223,089
25	288,223,089	3,051,857	109,691,786	1,026,991	15,998,696	196,554,865
26	196,554,865	2,683,193	110,583,186	916,596	9,726,811	97,465,086
27	97,465,086	2,329,784	111,264,566	807,866	2,957,738	-
28	-	1,996,092	111,761,427	702,308	-	-
29	-	1,682,663	111,970,050	600,874	-	-
30	-	1,405,535	111,902,008	509,129	-	-
31	-	1,158,894	111,487,087	425,820	-	-
32	-	946,049	110,700,310	352,482	-	-
33	-	767,163	109,534,350	289,660	-	-
34	-	614,817	107,993,198	235,283	-	-
35	-	488,956	106,132,782	189,566	-	-
36	-	385,690	103,949,260	151,461	-	-
37	-	302,847	101,501,086	120,469	-	-
38	-	236,506	98,844,724	95,251	-	-
39	-	183,802	96,017,939	75,033	-	-
40	-	140,871	93,071,327	58,245	-	-
41	-	105,211	90,020,065	44,037	-	-
42	-	77,223	86,873,129	32,746	-	-
43	-	54,542	83,635,876	23,406	-	-
44	-	38,684	80,322,994	16,800	-	-
45	-	26,560	76,957,822	11,660	-	-
46	-	17,626	73,542,165	7,813	-	-
47	-	12,036	70,089,302	5,392	-	-
48	-	8,143	66,619,189	3,697	-	-
49	-	5,309	63,138,569	2,439	-	-
50	-	3,516	59,652,895	1,633	-	-



Single Discount Rate Development

Present Values of Projected Benefits

Ending June 30, 2121

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments Using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments Using Municipal Bond Rate (v _f)	Present Value of Benefit Payments Using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^a ((a)-.5)	(g)=(e)*v _f ^a ((a)-.5)	(h)=(c)/(1+sdr) ^a ((a)-.5)
1	\$ 447,377,971	\$ 46,642,988	\$ 46,642,988	\$ -	\$ 45,133,679	\$ -	\$ 45,900,589
2	491,867,992	50,765,794	50,765,794	-	45,995,390	-	48,380,113
3	523,465,411	54,589,045	54,589,045	-	46,310,275	-	50,380,791
4	551,657,501	58,319,824	58,319,824	-	46,325,149	-	52,124,210
5	576,568,190	61,933,079	61,933,079	-	46,062,981	-	53,605,550
6	597,238,181	65,568,822	65,568,822	-	45,662,059	-	54,960,194
7	614,969,089	69,044,069	69,044,069	-	45,020,803	-	56,045,539
8	629,743,370	72,486,682	72,486,682	-	44,256,170	-	56,981,868
9	641,416,057	75,806,276	75,806,276	-	43,336,069	-	57,709,515
10	649,912,441	79,073,738	79,073,738	-	42,325,819	-	58,295,942
11	655,101,030	82,177,132	82,177,132	-	41,186,305	-	58,670,641
12	656,913,613	85,119,943	85,119,943	-	39,944,953	-	58,852,507
13	655,333,678	87,903,538	87,903,538	-	38,624,751	-	58,857,769
14	650,317,145	90,496,670	90,496,670	-	37,232,371	-	58,680,504
15	641,849,812	92,987,140	92,987,140	-	35,821,167	-	58,391,270
16	629,824,689	95,310,927	95,310,927	-	34,378,607	-	57,960,420
17	614,184,644	97,463,462	97,463,462	-	32,916,690	-	57,397,695
18	594,876,375	99,510,592	99,510,592	-	31,468,235	-	56,752,596
19	571,772,013	101,414,753	101,414,753	-	30,028,453	-	56,012,034
20	541,975,351	103,186,613	103,186,613	-	28,607,765	-	55,190,886
21	504,191,970	104,846,045	104,846,045	-	27,217,070	-	54,307,506
22	464,790,828	106,287,282	106,287,282	-	25,834,459	-	53,315,428
23	421,482,638	107,545,777	107,545,777	-	24,475,985	-	52,243,078
24	374,248,325	108,641,679	108,641,679	-	23,151,121	-	51,108,797
25	288,223,089	109,691,786	109,691,786	-	21,886,606	-	49,973,192
26	196,554,865	110,583,186	110,583,186	-	20,659,612	-	48,788,321
27	97,465,086	111,264,566	97,465,086	13,799,479	17,049,470	8,336,585	47,538,716
28	-	111,761,427	-	111,761,427	-	66,245,751	46,243,033
29	-	111,970,050	-	111,970,050	-	65,119,123	44,866,277
30	-	111,902,008	-	111,902,008	-	63,853,563	43,423,001
31	-	111,487,087	-	111,487,087	-	62,418,368	41,895,784
32	-	110,700,310	-	110,700,310	-	60,810,317	40,286,393
33	-	109,534,350	-	109,534,350	-	59,036,329	38,603,233
34	-	107,993,198	-	107,993,198	-	57,109,190	36,858,151
35	-	106,132,782	-	106,132,782	-	55,068,054	35,079,265
36	-	103,949,260	-	103,949,260	-	52,919,066	33,272,554
37	-	101,501,086	-	101,501,086	-	50,699,309	31,462,934
38	-	98,844,724	-	98,844,724	-	48,442,375	29,671,931
39	-	96,017,939	-	96,017,939	-	46,170,535	27,913,127
40	-	93,071,327	-	93,071,327	-	43,910,564	26,202,083
41	-	90,020,065	-	90,020,065	-	41,670,913	24,542,739
42	-	86,873,129	-	86,873,129	-	39,456,608	22,936,807
43	-	83,635,876	-	83,635,876	-	37,270,693	21,384,737
44	-	80,322,994	-	80,322,994	-	35,120,067	19,889,093
45	-	76,957,822	-	76,957,822	-	33,014,810	18,454,048
46	-	73,542,165	-	73,542,165	-	30,955,158	17,078,082
47	-	70,089,302	-	70,089,302	-	28,946,025	15,762,250
48	-	66,619,189	-	66,619,189	-	26,994,614	14,508,737
49	-	63,138,569	-	63,138,569	-	25,102,276	13,316,460
50	-	59,652,895	-	59,652,895	-	23,269,684	12,183,986



Single Discount Rate Development Present Values of Projected Benefits Ending June 30, 2121 (Concluded)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments Using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments Using Municipal Bond Rate (v _m)	Present Value of Benefit Payments Using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^a ((a)-.5)	(g)=(e)*v ^m ^((a)-.5)	(h)=(c)/((1+sdr) ^a (a-.5)
51	\$	\$ 56,176,178	\$	\$ 56,176,178	\$	\$ 21,500,657	\$ 11,111,530
52	-	52,713,240	-	52,713,240	-	19,795,198	10,097,298
53	-	49,271,340	-	49,271,340	-	18,154,115	9,139,946
54	-	45,866,289	-	45,866,289	-	16,581,160	8,239,610
55	-	42,503,726	-	42,503,726	-	15,076,096	7,394,415
56	-	39,195,408	-	39,195,408	-	13,640,732	6,603,525
57	-	35,958,114	-	35,958,114	-	12,278,348	5,866,801
58	-	32,806,279	-	32,806,279	-	10,991,086	5,183,525
59	-	29,755,560	-	29,755,560	-	9,781,205	4,553,026
60	-	26,821,839	-	26,821,839	-	8,650,742	3,974,517
61	-	24,019,825	-	24,019,825	-	7,601,079	3,446,906
62	-	21,362,281	-	21,362,281	-	6,632,750	2,968,732
63	-	18,859,749	-	18,859,749	-	5,745,429	2,538,184
64	-	16,520,823	-	16,520,823	-	4,938,088	2,153,192
65	-	14,352,494	-	14,352,494	-	4,209,157	1,811,516
66	-	12,359,706	-	12,359,706	-	3,556,448	1,510,730
67	-	10,545,358	-	10,545,358	-	2,977,215	1,248,256
68	-	8,910,377	-	8,910,377	-	2,468,230	1,021,415
69	-	7,453,249	-	7,453,249	-	2,025,703	827,400
70	-	6,169,759	-	6,169,759	-	1,645,276	663,288
71	-	5,053,055	-	5,053,055	-	1,322,103	526,080
72	-	4,093,608	-	4,093,608	-	1,050,892	412,731
73	-	3,279,707	-	3,279,707	-	826,090	320,229
74	-	2,598,207	-	2,598,207	-	642,106	245,676
75	-	2,034,791	-	2,034,791	-	493,393	186,326
76	-	1,574,730	-	1,574,730	-	374,645	139,644
77	-	1,203,788	-	1,203,788	-	280,999	103,379
78	-	908,535	-	908,535	-	208,083	75,559
79	-	676,564	-	676,564	-	152,035	54,490
80	-	496,715	-	496,715	-	109,518	38,742
81	-	359,166	-	359,166	-	77,698	27,129
82	-	255,468	-	255,468	-	54,224	18,687
83	-	178,509	-	178,509	-	37,176	12,645
84	-	122,365	-	122,365	-	25,003	8,394
85	-	82,141	-	82,141	-	16,468	5,457
86	-	53,887	-	53,887	-	10,600	3,467
87	-	34,490	-	34,490	-	6,657	2,149
88	-	21,509	-	21,509	-	4,073	1,298
89	-	13,050	-	13,050	-	2,425	763
90	-	7,690	-	7,690	-	1,402	435
91	-	4,403	-	4,403	-	788	241
92	-	2,456	-	2,456	-	431	130
93	-	1,333	-	1,333	-	230	69
94	-	703	-	703	-	119	35
95	-	360	-	360	-	60	17
96	-	180	-	180	-	29	8
97	-	87	-	87	-	14	4
98	-	40	-	40	-	6	2
99	-	17	-	17	-	3	1
100	-	7	-	7	-	1	-
Totals					\$ 960,912,013	\$ 1,255,885,961	\$ 2,216,797,974



SECTION E

GLOSSARY OF TERMS

Glossary of Terms

<i>Accrued Service</i>	Service credited under the system which was rendered before the date of the actuarial valuation.
<i>Actuarial Accrued Liability (AAL)</i>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
<i>Actuarial Assumptions</i>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<i>Actuarial Cost Method</i>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<i>Actuarial Equivalent</i>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<i>Actuarial Gain (Loss)</i>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<i>Actuarial Present Value (APV)</i>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
<i>Actuarial Valuation</i>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, Total Pension Liability, and related actuarial present value of projected benefit payments for pensions.
<i>Actuarial Valuation Date</i>	The date as of which an actuarial valuation is performed.
<i>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</i>	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically, the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

Glossary of Terms

<i>Amortization Method</i>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<i>Amortization Payment</i>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<i>Cost-of-Living Adjustments</i>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<i>Covered-Employee Payroll</i>	The payroll of employees that are provided with pensions through the pension plan.
<i>Deferred Inflows and Outflows</i>	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
<i>Deferred Retirement Option Program (DROP)</i>	A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.
<i>Discount Rate</i>	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none">1. The benefit payments to be made while the pension plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

Glossary of Terms

Entry Age Actuarial Cost Method (EAN)

The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

Fiduciary Net Position

The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.

GASB

The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Long-Term Expected Rate of Return

The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.

Money-Weighted Rate of Return

The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For GASB purposes, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.

Multiple-Employer Defined Benefit Pension Plan

A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.

Municipal Bond Rate

The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.

Net Pension Liability (NPL)

The NPL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit pension plan.

Non-Employer Contributing Entities

Non-employer contributing entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.

Normal Cost

The portion of the actuarial present value allocated to a valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.



Glossary of Terms

<i>Other Postemployment Benefits (OPEB)</i>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.
<i>Real Rate of Return</i>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<i>Service Cost</i>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
<i>Total Pension Expense</i>	The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year: <ol style="list-style-type: none">1. Service Cost2. Interest on the Total Pension Liability3. Current-Period Benefit Changes4. Employee Contributions (made negative for addition here)5. Projected Earnings on Plan Investments (made negative for addition here)6. Pension Plan Administrative Expense7. Other Changes in Plan Fiduciary Net Position8. Recognition of Outflow (Inflow) of Resources due to Liabilities9. Recognition of Outflow (Inflow) of Resources due to Assets
<i>Total Pension Liability (TPL)</i>	The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	The UAAL is the difference between actuarial accrued liability and valuation assets.
<i>Valuation Assets</i>	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement No. 68, the valuation assets are equal to the market value of assets.